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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



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Applicant's or agent's file reference DC306.P03.002	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/GB 03/00146	International filing date (day/month/year) 16.01.2003	Priority date (day/month/year) 19.01.2002
International Patent Classification (IPC) or both national classification and IPC B65D88/12		
Applicant CLIVE-SMITH, Martin		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of 5 sheets, including this cover sheet. <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of 3 sheets.
3.	This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the opinion II <input type="checkbox"/> Priority III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 10.07.2003	Date of completion of this report 27.02.2004
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Lendfers, P Telephone No. +49 89 2399-2933 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB 03/00146

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-9 as originally filed

Claims, Numbers

1-17 filed with telefax on 16.02.2004

Drawings, Sheets

1/7-7/7 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
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International application No. PCT/GB 03/00146

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 16

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 16 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the Standard.

☐ the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-15,17
	No: Claims	
Inventive step (IS)	Yes: Claims	1-15,17
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-15,17
	No: Claims	

2. Citations and explanations

**INTERNATIONAL PRELIMINARY
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see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB03/00146

Section III

Claim 16 relates to a hinge "substantially as hereinbefore described, with reference to, and as shown in, the accompanying drawings". This is in contrary to Rule 6.2(a) PCT.

Section V

The invention relates to a fabricated hinge, configured for mounting a folding corner post and/or end wall, upon a platform base of a collapsible flatrack container, the hinge comprising an inner hinge portion, carried by a pivot pin, captive in a outer hinge portion in turn secured to the platform base, and fabricated of multiple discrete elements, including opposed flanges with an intervening web.

The closest prior art document appears to be US-A-5 755 472. This document discloses a collapsible platform base flatrack container with folding endwalls, pivot pin base connection, corner posts and infill panel. A post-housed counterbalance spring and pivot transfer link geometry pre-set vertical corner post and endwall disposition.

Document US-A-3 765 556 discloses a collapsible container with concertina-fold longitudinal side walls and corner post base offset pivot configuration bypassing vertical loads in an upright post condition, in favour of a gudgeon pin and trunnion base to floor interlock.

Neither of these documents envisage fabricated hinge construction for robust and stiff configuration, without disproportionate material thickness and attendant weight penalty. Therefore, the combination of the features of independent claim 1 is neither known from, nor rendered obvious by, the available prior art. Consequently, the subject-matter of independent claim 1 is new and inventive. The subject-matter of dependent claims 2 to 15 and 17 also fulfils the requirements of novelty and inventive step (Articles 33(2) and 33(3) PCT). Furthermore, claims 1 to 15 and 17 are considered as susceptible of industrial application.

Claims

1.
A fabricated hinge,
configured for mounting
5 a folding corner post and/or end wall,
upon a platform base (20)
of a collapsible flatrack container (11),
the hinge comprising
10 an inner hinge portion (32),
carried by a pivot pin (19),
captively in an outer hinge portion (21),
in turn secured to the platform base,
and fabricated of multiple discrete elements,
15 including opposed flanges (33, 34, 35, 36),
with an intervening web (37).
2.
A hinge of Claim 1,
with an inner hinge outboard flange
20 having an outwardly flared upstand,
bounding a corresponding flared upper web contour,
to present a greater post mounting section,
3.
A hinge of either preceding claim,
of laminated construction,
25 with a plurality of juxtaposed web plates,
secured (eg welded) together,
and/or between common individual flanges,
or multiple juxtaposed flange portions.
4.
30 A hinge of any preceding claim,
with flanges configured to mate
with corresponding corner post flanges,
by, say, end abutment, overlay, superimposition or mutual inset.
5.
35 A hinge of any preceding claim,
with replaceable / demountable web and/or flanges,
allowing (re-)assembly in different configurations.

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6.
A hinge of any preceding claim,
with differential inboard and outboard flange widths.
- 5 7.
A hinge of any preceding claim,
wherein an inner hinge outboard flange is profiled locally,
such as with a cut-out or recess,
to accommodate a hinge locking detent
between inner and outer hinge portions.
- 10 8.
A hinge of any preceding claim,
wherein an inner hinge outboard flange is profiled,
with corresponding web span,
to achieve a waisted overall profile,
15 with superimposed blocks secured outboard thereof,
to define an intervening recess or cut-out
for a travel limit abutment block
between inner and outer hinge portions.
- 20 9.
A hinge of any of preceding claim,
with individual component elements
of diversely fabricated, forged or cast construction.
- 25 10.
A hinge of any of preceding claim,
with differential respective profiles
of inner hinge portion and folding post
- 30 11.
A hinge of any preceding claim,
wherein a joint between hinge and post
incorporates some relative interfit or overlap.
12.
A hinge of any preceding claim,
with a butt joint,
between a hinge top flange and post end.

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13.

A hinge of any preceding claim,
combined with post sections
including, 'I' beam, 'U' or 'C' sections,
hollow or solid rectangular tubular forms.

14.

A hinge of any of preceding claim,
including 'I' beam, 'U' or 'C' sections,
for inner hinge portion forms.

15.

A hinge of any preceding claim,
with an 'I' section inner hinge portion,
fitted within a 'U' or 'C' section outer hinge portion,
upon an inboard pivot axis carried between spaced outer hinge flanges,
and an outboard inner hinge portion fitting
within a 'U' or 'C' section throat plate between outer hinge flanges,
an inboard inner hinge flange sitting inboard of the throat,
an inner hinge top portion protruding beyond that throat,
with a leading edge abutment profile to engage the throat
to serve as an outer limit for inner hinge and surmounting post disposition.

16.

A hinge, substantially as hereinbefore described,
with reference to, and as shown in, the accompanying drawings.

17.

A collapsible flatrack container
with a fabricated hinge of any preceding claim
supporting folding posts and/or end walls
upon a platform deck.

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